a) The most likely cause of his bleed is portal hypertension; leading to oesophageal / gastric varices or portal hypertensive gastropathy / duodenopathy. The most common source of bleeding in portal hypertension is oesophageal varices.

b)

- Size of the varices.
- Red colour signs (red spots, hematocystic spots or wale markings) of varices, as seen on endoscopy.
- Severity of liver disease (as judged by child's score).
- Active alcohol abuse.

c)

1. **Active bleeding.**
2. **Prophylaxis after Ist bleed.**

To control active bleeding, following interventions are used:

Pharmacological measures:-

- Somatostatin / octreotide infusions (50 ug bolus, followed by 50 ug/hr), reduce portal pressure.
- Vitamin K, to correct prolong prothrombin time.

Endoscopic options:-

- Banding of the oesophageal varices.
- Sclerothrapy of oesophageal / gastric varices, by injecting a sclerosant e.g. ethanolamine, tetradecyl sulfate.

Balloon Tube Tamponade:-

Done with specially designed Nasogastric tube, named as Sangstaken-Blakmore tube or Minnesota tube. They have gastric and oesophageal balloons which mechanically compress the varices.

Portal decompressive surgical procedures:-

- Transvenous intrahepatic portosystemic shunts. (TIPSS).
- Emergency portosystemic shunt surgery.

For prophylaxis after first bleed, following options are available:-

- **Pharmacological options:-**
  - Non-selective β adrenergic blockers (propranolol, nadolol) are effective in reducing the incidence of re-bleed.
  - Nitrates are also used. The combination of β-blockers and nitrates are more effective than either of them alone.
- Endoscopic techniques:-
  - Band ligation and sclerotherapy both can be used for prophylaxis, but band ligation is superior to sclerotherapy in preventing re-bleed.
- Surgical options:-
  - Transvenous intrahepatic portosystemic shunts. (TIPSS).
  - Portosystemic shunts.
  - Liver transplantataion.

d)

1. Ascites.

2. Encephalopathy.
3. Serum bilirubin.
4. Serum albumin.
5. Prothrombin time.

Q.No.50 A 55 years old male patient is admitted with history of generalized tonic-clonic seizures. He is dysphasic but his son gave a history that he has not been well for past 4 days with high temperature and had been confused since one day before admission. Appendicectomy was done 5 years ago, he was treated for mild hypertension for 5 years. On examination he was febrile (temp. 102oF), restless and disoriented. He had fluent dysphasia, possibly right homonoymous hemianopia. Investigation showed Hb 13.5 gm%, WBC 10.5×10^9/L and ESR 50 mm in 1st hour.

a) Give 2 possible diagnoses.
b) What 4 investigations are required to reach the diagnosis?
c) What treatment is available for this condition?

a)

1. Viral encephalitis; preceding history of fever, confusion followed by generalized tonic-clonic seizures suggest the diagnosis.
2. Brain abscess; history of fever, fits with focal neurological deficit also raises the doubt of space occupying lesion, most likely brain abscess.

b)

1. CT and MRI brain; may show diffuse areas of oedema, often in temporal lobe in case of encephalitis. Ring enhancing hypodense lesion will be seen on CT-contrast in case of brain abscess.
2. EEG; shows characteristics slow wave changes in encephalitis.
3. CSF examination; will reveal raised protein, normal glucose and lymphocytosis in encephalitis.
4. Specific viral blood and CSF serology (for herpes simplex virus) will help to confirm the diagnosis of viral encephalitis as well.

c)

1. He will be treated immediately with intravenous acyclovir (10mg/kg 8 hourly). This will be given for 10 days.
2. Seizures will be treated with anticonvulsants.
3. Supportive measures for stuporosed patients (Nasogastric tube, Foley catheter, caloric / fluid-electrolyte balance etc.) will be started.

Q.No.51. A 50 years old man who is diabetic and hypertensive for last 10 years complain of drooping of eyelids and diplopia for last six months. He is on propanolol, hydrochlorothiazide and chlorpheniramine. His condition worsened during a recent bout of

chest infection. On examination he had normal pupil with normal tendon reflexes and showed no other focal neurological deficit.

a) **What is the likely diagnosis?**
b) **What further clinical observations could substantiate the diagnosis?**
c) **How will you confirm the diagnosis?**
d) **Give an outline of management.**

a) The patient is most likely suffering form myasthenia gravis.
The features suggesting it:-

- b/l ptosis and diplopia in the presence of normal pupil.
- Normal tendon reflexes.
- No neurological deficit.
- Worsening of symptoms during bout of chest infection.

b)

1. The most likely clinical observation is worsening of weakness on sustained activity.
2. This weakness improves after rest.
3. Speech will be assessed. Appearance of dysarthria on continuous speech also favours myasthenia.
4. Weakness of bulbar muscles will be looked for.
5. Absence of sensory loss also favours myasthenia gravis.

c)

- The diagnosis is confirmed by edrophonium test, short acting anticholinesterase, edrophonium will be give I/V in a dose of 10 mg (2mg given initially as test dose, 8 mg 30 seconds later, if test done is well tolerated).
- There will be an obvious improvement in weakness which lasts for 5 minutes.
- Electromyography response (EMG) of the affected muscles is also characteristic. On continued stimulation of the muscle, there will be a decremental response.
- Levels of acetylcholine receptor antibodies will be checked. They are elevated in 90% of cases.
- To exclude co-existing thymoma, AP/lateral views of chest and CT chest will be done.

d)

A. He will be started on anti-cholinesterase, Neostigmine (15mg/day) or pyridostigmine (60mg /day). This will improve him symptomatically. Thymectomy will be done for sustained symptomatic relief.
B. Incase the patient does not improve or develop more neurological weakness, then steroids with or without immunosuppressive agents will be given.

Q.No.52. A 15 years old male presents with history of recurrent epistaxis along with headaches of 2 months duration. He also has noted pain in lower extremities on physical exertion. On examination pulse 82/min, regular, B.P. 160/120 mmHg, he is afebrile and

there is no lymphadenopathy, oedema or jaundice, JVP is not raised. There is a mid systolic murmur of grade 2/6 audible over the precordium. Bulk of muscles is relatively reduced in the lower limbs but with normal power, reflexes and sensation, plantars are flexor in response. Fundus reveals b/l papilloedema and haemorrhages. Abdominal examination is normal. Lab. Investigations Hb: 14.8g%, TLC 7600/mm3, DLC normal, platelets 250000/cmm, bleeding time, PT & APTT are all normal. Urea is 35mg/dl, RBS 112 mg%, ECG-shows left ventricular hypertrophy, x-ray chest show widening of mediastinum. US abdomen is shows normal.

a) What is the most possible diagnosis? Justify.
b) What other clinical signs you expect in this patient?
c) Indicate further investigations?
d) Give the management.

a) The most possible diagnosis is Coarctation of aorta. Features suggesting the diagnosis are:-

- Mid-systolic murmur over the precordium.
- Reduced bulk of muscles only in the lower limb with normal power, reflexes, indicating diminished blood supply to lower limbs.
- Hypertension with papilledema and retinal haemorrhages.
- ECG showing left ventricular hypertrophy.
- X-ray chest showing widening of mediastinum, may be due to pre and post-stenotic dilatation.

b)

1. Radio-femoral delay, i.e. femoral pulsations are weak as compared to radial pulsations.
2. Weak femoral pulse.
3. Normal or low pressure in legs, with hypertension in arms.
4. Strong arterial pulsation in neck and suprastenal notch.
5. Systolic thrill long the left sternal border due to flow of blood in collaterals.
6. Late systolic murmur (as heard in this patient) best heard posteriorly over spinous processes.
7. This patient can have associated aortic insufficiency due to bicuspid aortic valve. So the clinical signs of aortic regurgitation can also be present (collapsing pulse, wide pulse pressure, early diastolic murmur).

c)

- Electrocaridogram (ECG) will show left ventricular hypertrophy.
- Chest x-ray will show rib notching due to enlarged collateral intercostal arteries. It will also show left ventricular enlargement, enlarged left subclavian artery and post-stenotic aortic dilatation.
- Transthoracic echocardiogram, followed by Doppler studies will help to estimate the gradient across the stenosis.

- Cardiac catheterization is the definitive diagnostic procedure, will not only recognize the defect but also measures the exact gradient.
- Aortography, to delineate the obstruction.
- MRI can also be done to determine the anatomical defect.

d)

1. The guidelines of management are to resect the coarcted site in all patients under age 20. While less than 40 years, surgery is done if there is refractory hypertension or left ventricular hypertrophy.
2. So this patient needs resection of coarcted site. Meanwhile, his blood pressure will be stabilized with I/V nitroprusside and beta-blockers.
3. In the long run, he will be given beta-blockers with diuretics orally to control his B.P. as 25% of patient continues to have hypertension despite surgery.

Q.No.53. A 30 years old lady presented with history of epigastric pain for 6 months. She was given H_2 receptor antagonists but to no avail. On inquiry, she also complained of increased frequency of bowel movements and weight loss during this period. She was malnourished, afebrile and anaemic. Pulse 100/min, BP 110/60 mmHg, no lymphadenopathy. Abdominal examination revealed epigastric tenderness, no visceromegaly or ascites. Other systemic examination was normal. Investigations: Hb 9.0 gm/dl, TLC normal ,ESR 60mm in first hour. Urine analysis normal, stool D/R and culture -ve. X-ray chest normal. Abdominal ultrasound essentially normal. Upper G.I endoscopy: hyperemia at gastro esophageal junction, ulcers in 1st and 2nd part of duodenum.

a) Give likely diagnosis with justification.
b) Give further three investigations in order of priority to reach the diagnosis.
c) Outline the management of this patient.

a) She has developed Zollinger Ellison syndrome which is caused by gastrin hypersecretion. Features suggestive are:-

- Severe Epigastric pain.
- Epigasric tenderness.
- Hyperemia at gastro esophageal junction and duodenal ulcers (characteristic).
- Chronic diarrhea and weight loss as excess acid cause damage to intestinal mucosa and inactivation of pancreatic enzymes.
- Symptoms refractory to H2- receptor antagonist.
- Normal clinical examination and baseline investigations.

b)

- Fasting serum gastrin level, if > 1000 pg/ml, the diagnosis of Zollinger Ellison syndrome is established.
- Secretin stimulation tests are done if gastrin levels are below 1000 pg/ml. IV secretin 2 u/kg, raises serum gastrin by 200 pg/ml in 2 – 30 minutes in patients with Zollinger Ellison syndrome.

- MRI abdomen along with somatostatin receptor scintigraphy (SRS) to localize primary tumor as well as metastases if present.

c)

1. This patient needs to reduce acid hypersecretion. Both medical and surgical management is required.
2. Proton pump inhibitor (omeprazole, lansoprazole or pantoprazole) will be given at dose of 40 – 120 mg/day .
3. Gastrinoma will be resected after pre or intra-operative localization. Cure is possible only if gasrinoma has not metastasized otherwise antisceretory medications will be the only option available.

Q.No.54. A 45 years old lady 24 hours following abdominal hysterectomy develops acute pain and swelling of left knee joint.

a) Give four most likely diagnoses.

b) Suggest 4 relevant investigations to confirm the diagnosis.

a) She has developed acute monoarthritis which could be due to:-

1. Acute gout – surgical stress my precipitate an acute attack in predisposed patient.
2. Pseudogout – commonly involves knee joint.
3. Septic arthritis ,septicemia following surgery can cause arthritis.
4. Trauma to the knee joint could have happened during shifting the patient for surgery.

b)

- X-ray left knee joint, will show soft tissue swelling, may also show associated trauma. In gout, the x-ray may be normal or may show punched out erosions with an over hanging rim of cortical bone (rat–bite). Soft tissue tophus may also be visible. In case of septic arthritis, bony erosions, narrowing of joint space, osteomyelitis or periostitis may be seen.
- Joint aspirate analysis will be done. For gout, it will be examined under polarized light. It will show needle shaped negatively birefringent crystals. While in case of pseudogout positively birefringent rhomboid shaped crystals are seen. In case of trauma, it might be haemorrhagic. In septic arthritis, WBC count will be more than 50,000 with neutrophils pre-dominance (75%). Glucose is less 25% of the serum glucose. Culture may show growth of organism.
- Blood cultures, for septic arthritis.
- Serum uric acid, if elevated confirms gouty arthritis.

Q.No.55. A 25 years old lady presented to an ophthalmologist with progressively decrease vision of both eyes for the last four months. She was found to have b/l cataract. She had history of two attacks of generalized fits in the past. She was referred to

physician for medical assessment. On examination she was thin built, pulse 88/min, BP 110/70 mmHg, afebrile. Other examination was normal.

a) **What are two most likely diagnoses?**
b) **Enumerate three relevant investigations.**
c) **Give three principles of treatment.**

a) Primary hypoparathyroidism, as she has cataract at younger age group with no other symptoms and signs. Hypocalcaemia also cause neurological symptoms including generalized fits.

In Pseudohypoparathyroidism, patients develop hypocalcaemia due to receptor resistance to parathormone (PTH).

b)

- Serum calcium and phosphorus; will show hypocalcaemia and hyperphosphatemia in hypoparathyroidisim.
- Parathormone (PTH) levels will be low in primary hypoparathyroidism, while it is elevated in case of pseudohypoparathyrodisim.
- CT brain, may show abnormal calcification at different sites (commonest; basal ganglia).

c)

1. Avoid drugs causing hypocalcemia (loop diuretics, phenytoin, plicamycin, alendronate).
2. Replace Ca^{+2}, Mg^{+2} and vitamin D. Calcium salts are given in a dose of 1 – 2 g /day. Magnesium oxide tablets are provided in a dose of 600 mg /day. Whereas ergocalciferol (25,000 to 150,000 U/day) or calcitriol (0.25 kg/day to 2.0 kg /day) is given to replace vitamin D.
3. Reassure the patient, that if she remains compliant to supplements, the disease is not progressive but cataracts are permanent so she should plan cataract extraction by consulting an ophthalmologist.

Q.No.56. An 18 years old girl presents with short stature, primary amenorrhea. Physical examination shows under developed secondary sexual characters.

a) **What is the most likely diagnosis?**
b) **Enlist three important physical signs likely to be present in this patient.**
c) **Enumerate three important investigations.**

a) The most likely diagnosis is Turner's syndrome. The features suggesting it are:-

- Short stature.
- Primary amenorrhea.
- Underdeveloped secondary sexual character.

b)
1. Webbed neck.
2. High arched palate.
3. Hypertension and renal abnormalities.

c)
- Serum FSH (follicle stimulating hormone and leutinizing hormone) and LH, will be high in case of Turner's syndrome.
- Serum estrogens, will be low due to primary ovarian failure.
- Karyotyping will show the 45XO genotype, typical of Turner's syndrome.

Q.No.57. A 16 years old college student presents with sore throat, high grade fever and cervical lymphadenopathy for one month. Physical examination reveals temperature 102°F, pulse 110/min, exudative pharyngitis, bilateral cervical adenopathy and mild tenderness in right hypochondrium. Investigations show TLC 20,000/cumm with 55% lymphocytes.

a) What is the most likely diagnosis?
b) Mention two investigations to confirm the diagnosis?
c) Enumerate three important complications you anticipate.

a) The most likely diagnosis infectious mononucleosis. The key features leading to this diagnosis are:-
- Sore throat.
- Cervical lymphadenopathy.
- Exudative pharyngitis.
- Lymphocytic leucocytosis.

b)
1. Peripheral blood smear, will show atypical lymphocytes, which are larger than normal mature lymphocytes, stain darkly and have vacuolated cytoplasm. In addition to this, fragmented RBC's might be seen due to cold haemolytic anaemia.
2. Heterophil antibody test, positive within 4 weeks after onset of illness, will also be done. Antibodies directed against several Ebstein-barr viral antigens will be detected.

c)
- Fulminant hepatitis.
- Pericarditis and myocarditis.
- Neurologic involvement including transverse myelitis, encephalitis and Guillain-Barre syndrome.

Q.No.58. A 30 years old female during third trimester of pregnancy complains of pain, pins and needles on outer aspect of left thigh of one month duration. Physical examination shows no abnormality except impairment of cutaneous sensation on the affected area.

a) **What is the most likely diagnosis?**
b) **Give the pathophysiology.**
c) **Give treatment options.**

a) The most likely diagnosis is Meralgia Paresthetica, compression lateral femoral cutaneous nerve.

b) Meralgia paraesthetica occurs due to compression of lateral femoral cutaneous nerve. This nerve passes under the outer portion of inguinal liganrent to reach the thigh. Hyperextension of the hip joint or increased lordosis such as occurs during pregnancy leads to nerve compression by the posterior fascicle of the ligament. This leads to pain, paraesthesia and numbness on the outer aspect of thigh.

c) Reassurance of the patient that the disease is temporary and will settle after delivery. Sitting position, sometimes help to relief the symptoms.

Hydrocortisone injection medial to the anterior supeior iliac spine often relieve symptoms temporarily. Nerve decompression by transposition provides more lasting relief.

Q.No.59. A middle aged male patient presented with history of recurrent nose bleed, and malena for the last 6 weeks. Two weeks back, he developed pain and black discoloration of left foot. Physical examination showed anaemia, moderate splenomegaly and gangrene of left big toe. Lab Investigation: Hb 10 g%, TLC 12,000 /mm3, with normal DLC and platelets 1000,000.

a) **What is the diagnosis?**
b) **List three further investigations.**
c) **List 4 steps in the management.**

a) The diagnosis is essential thrombocytosis, myeloproliferative disorder. He has presented with ischemic gangrene after thrombotic event. His bleeding episodes are due to qualitatively defective platelets. The platelets count of 10, 00,000 further supports the diagnosis of essential thrombocytosis.

b) 1. Peripheral blood smear, will show large platelets with normal RBC morphology.
2. Bone marrow, will show increased megakaryotes with no other abnormality.
3. Doppler ultra sound of the left lower limb to see the occluded blood vessel.

c) 1. Reduction of platelet count by starting hydoxyurea (2g/day), but if his anaemia worsens, he will be shifted to anagrelide (2 – 4 mg/day).
2. Surgical opinion regarding management of foot gangrene.
3. Antiplatelet agent e.g. aspirin will be started in low dose, to reduce the risk of thrombosis.
4. If still bleeding continues, he will be advised plateletphoresis, to lower the platelet count rapidly.

Q.No.60. A 45 years old taxi driver with a history of weight loss and irritating cough over six months. He gradually becomes confused in last 12 hours and had an epileptic fit at home. On admission to hospital he had already regained consciousness, but remained drowsy. He had nicotine stained fingers but no clubbing. His pulse was 96/min, sinus rhythm, with blood pressure of 160/105 mmHg, both lying and standing. There were absent breath sounds over the right lung. The remainder of the physical examination was normal. There was no neurological abnormality. Screening test results;

Hb	10.1 g/dl	Total proteins	67 g/L
WBC	10,000	Alanine transaminase	39 U/L
K+	3 mmol/L	urine analysis	Normal
HCO3	26 mEq/L	ESR	49 mm/1st hour
Cr	0.7 mg/dl	MCV	83 fl
Na	112 mmol/L	Ca	11.9 mg/dl
Cl	84 mmol/L	Al	38 g/L

What is the differential diagnosis?
What addition investigations would you consider?
How will you manage this patient?

a) He is a smoker with history of chronic cough and weight loss. There are absent breath sounds in right lung field with anaemia, raised ESR, hypocalcaemia, hypokalemia and hyponatremia due to SIADH (syndrome of inappropriate antidiureitc hormone) on lab. investigation. Based on these features, the differential diagnosis will include:-

1)Bronchogenic carcinoma.
2)Chronic pulmonary infection like tuberculosis.
3)Secondaries in the lung.
4)Parapneumonic effusion.
5)Empyema.

b)

- Chest x-ray to look for effusion, consolidation, collapse or cavitation.
- Sputum c/e with ZN and gram staining, followed by culture and PCR for mycobacterium tuberculosis.
- Sputum for malignant cells.
- If x-ray shows pleural effusion, then I would like to do pleural tap and analyze pleural fluid (protein, glucose, LDH, cell count, differential

ZN/gram stain, culture, malignant cells). If needed, pleural biopsy will also be done.

- Bronchoscopy to see any intrabronchial lesion.
- Transbronchial biopsy.
- CT-chest to assess the stage of carcinoma.
- In case if transbronchial biopsy is not possible, transthoracic needle aspiration or video assisted thoracoscopic surgery (VATS) or thoracotomy will be planned.
- Plasma and Urine osmolality to confirm SIADH. This will show decreased plasma osmolality (<280) and increased urine osmolality (>150 mosm/kg).
- Blood urea ,serum uric acid, low in SIADH.
- Serum phosphorus.
- PTHrP, parathromone related peptide is elevated as a part of paraneoplastic syndrome and is responsible for hypercalcemia.
- CT brain with contrast, as he had fits and drowsiness which is explainable with SIADH but still CT brain is required to rule out brain metastases.

c)

He has marked hyponatremia and has developed drowsiness and fits due to it. So he will be given hypertonic saline with frusemide, so as to raise plasma sodium and osmolality.

He has hypercalcemia too. To manage that he will be rehydrated after correcting hyponatremia. If needed, I.V bisphosphonates (pamidronate) will be given.

Management of underlying causes varies. For bronchogenic carcinoma, underlying type and stage of carcinoma is going to guide the management. Non-small cell carcinoma (in stage I and II) are resected, while in stage III and IV radiotherapy and chemotherapy are given. Small cell carcinoma is responsive to etoposide and cisplatin in limited stage disease (50 – 70%) as compared to extensive stage disease (15 – 40%).

For pulmonary tuberculosis, anti tuberculous therapy will be started.

For pneumonia or empyema, appropriate antibiotics will be given, along with chest tube intubation in the latter case.

Q.No.61. An 18 years old girl with high grade fever for last 2 weeks has been admitted with severe abdominal pain and vomiting. On examination she is anemic, pulse 120/min. and temperature 104°F, abdomen is distended and tender. Her previous blood report done a week prior to admission showed haemoglobin 11 gm%, WBC 5000/cumm with normal DLC. Repeat CBC reveals Hb 5 gm%, WBC 22,000/cmm, polys 75%. LFT's are normal.

a) What is the most likely diagnosis?
b) What three other possibilities would you consider?
c) Suggest most relevant investigation.

d)Give an outline of management.

a) The most likely diagnosis is Enteric fever followed by intestinal perforation. Her initial high grade fever with normal WBC count suggests enteric fever, while the latter c/o abdominal pain and vomiting associated with tachycardia, fever, abdomen distension and neutrophilic leucocytosis indicates that she has developed complications i.e. perforated ulcer that has led to peritonitis.

b)

1)Gynecological problems e.g.
Tubo-ovarian abscess.
Ruptured ectopic pregnancy.
2)Acute cholecystitis leading to ruptured gall bladder.
3)Perforated appendicitis.

c)

- X-ray abdomen erect to look for gas fluid levels, indicating viscus perforation.
- Ultrasound abdomen and pelvis to see for evidence of ectopic pregnancy, adenexal mass, cholecystitis.
- Blood cultures, which are positive in 50 % of cases of enteric fiver, during third week.

d)

- She will be admitted in ICU setting.
- She will be kept NPO.Nasogastric tube will be passed.I/V fluids with appropriate electrolytes composition will be started.
- Ceftriaxone (2g I/V O.D) with metronidazole (500 mg I/V 8 hourly) will be started.
- Surgical consultation regarding ulcer perforation will be planned.
- I/V proton pump inhibitors will be given.

Q.No.62. A 45 years old female presented with spastic paraparesis of three weeks duration. She is also c/o blurring of vision in one eye and urinary retention. She gives history of weakness in lower limbs almost similar to present episode 2 years ago for which she took treatment for 2 months and recovered completely.

a)What is most likely diagnosis?
b)What investigations you suggest for this patient?
c)How will you manage this case?

a) The most likely diagnosis is multiple sclerosis of relapsing remitting type, as she has multiple neurological deficits with complete recovery in the past. There is also

history of blurring of vision, probably due to optic neuritis, hallmark of multiple sclerosis.

b)

MRI brain and spinal cord, will show multiple demyelinating plaques, predominantly peri-ventricular in position.

CSF examination, to look for raised IgG in CSF along with oligoclonal bands. There may be mild lymphocytosis or raised proteins.

Delayed visual, auditory or somatosensory evoked potentials.

c)

First of all any exacerbating factor like infection or dehydration will be looked for and managed accordingly.

Then to hasten recovery, she will be given I/V methyl prednisolone 1g for 3 days, followed by prednisolone 1mg/kg daily for 1 week. This will be tapered off in the subsequent 2 – 3 weeks.

To modify the course of disease, as she has relapsing remitting variety, she can be given β- interferon or subcutaneous injection of glatiramer daily. This reduces the frequency of exacerbations.

To treat spasticity, she will be advised physiotherapy with baclofen or diazepam or tizanidine.

For urinary retention intermittent catheterization may suffice and bladder function will recover after pulse steroid therapy.

Q.No.63. A 16 years old school boy brought in medical OPD with history of recurrent watery diarrhea since 3 years. He gave history of bluish red flushing over face and neck during the episodes of diarrhea. On examination his pulse is 80/min, BP 110/80 mmHg, cyanosis and clubbing –ve, JVP raised. 3/6 pansystolic murmur at left lower sternal border increases on inspiration. Liver is palpable and tender.

a) What is the likely diagnosis?

b) Give two investigations that will help in diagnosis?

c) How will you manage this case?

a) The most likely diagnosis is carcinoid syndrome as he gives history of chronic diarrhea and flushing, while on examination he has raised JVP and he has pansystolic murmur due to tricuspid regurgitation with tender hepatomegaly.

b)

Urinary 5-hydroxyindoleacetic acid (5-HIAA) over 10 mg /24 hours confirms carcinoid syndrome.

To localize the primary lesion with metastases, the diagnostic technique is somatostatin receptor scintigraphy with an accuracy of > 90%.

c)

He will be given somatostatin analogue octreotide (150 mg S/C three times daily). This will provide relief from his diarrhea and flushing by inhibiting the hormone secretion.

Later on, surgical resection of the lesion will be planned. Resection of intestinal lesion and even of hepatic metastases provides marked improvement.

Q.No.64. A 45 years old male developed palpitation while climbing the stairs and become unconscious. He was shifted to emergency where he regained consciousness and revealed similar attacks in the past. On examination, pulse is 78/min, jerky in character, B.P is 120/80 mmHg. CVS examination reveals double impulse at apex, fourth heart sound, mid systolic murmur at the base and pan systolic murmur at the apex.

a) What is the diagnosis?
b) Give two differential diagnoses.
c) What investigations you will carry out?
d) What will be the treatment?

a) The most likely diagnosis is Hypertrophic obstructive cardiomyopathy (HOCM).
Key features suggesting this are:-

- Exertional syncope.
- Jerky pulse.
- Double apical impulse.
- S4
- Mid systolic murmur at base.

b)

- Aortic stenosis.
- Mitral valve prolapse.

c) Both can present with syncope clinically and both have systolic murmurs.

1. Chest x-ray, will be inconclusive.
2. ECG, will show left ventricular hypertrophy and prominent septal Q waves.
3. Transthoracic echocardiogram will show systolic anterior motion of mitral valve (SAM), asymmetric septal hypertrophy (ASH), small, hypercontractile left ventricle and delayed relaxation of left ventricle.
4. Doppler echocardiogram, will demonstrate the gradient across the dynamic obstruction.
5. Cardiac catheterization will also show the pressure gradient due to obstruction.
6. Holter monitoring will be advised to see any arrhythmias.
7. Genetic testing for family members.

d)

- He will be advised β-blockers.
- Calcium channel antagonist : Verapamil & diltiazem
- Disopyramide.